AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A method for mounting a rotatable reflector antenna having a main reflector with outermost side portions and an axial center, to reduce a radius of a swept arc of said main reflector as said main reflector is rotated about an azimuthal axis of rotation, said method comprising the steps of:

supporting said main reflector on a platform;

using a motor to rotate said platform about said azimuthal axis of rotation;

using an encoder to track said azimuthal axis of rotation and provide feedback to said motor; and

locating said main reflector on said platform such that said azimuthal axis of rotation is disposed forwardly of a plane extending perpendicularly through said axial center of said main reflector;

wherein said main reflector is fixedly supported relative to said platform ~~is fixedly coupled to a rotary joint~~ such that said main reflector rotates about said rotary joint and about said azimuthal axis of rotation; and

wherein said azimuthal axis is maintained forwardly of said main reflector at all times during rotation of said main reflector.

2. (Previously Presented) The method of claim 1, wherein the step of supporting said main reflector comprises supporting said main reflector on said platform

such that said azimuthal axis of rotation is disposed within a plane intersecting said outermost ends of said main reflector.

3. (Previously Presented) The method of claim 1, wherein the step of supporting said main reflector comprises supporting said main reflector on said platform such that said azimuthal axis of rotation is disposed forwardly of a plane intersecting said outermost ends of said main reflector.

4. (Currently Amended) A method for mounting a rotatable reflector antenna having a main reflector with outermost lateral side portions and an axial center, on an aircraft, in a manner which reduces a radius of a swept arc of said lateral side portions of said main reflector as said main reflector is rotated about an azimuthal axis of rotation, said method comprising the steps of:

supporting said main reflector on a member adjacent an outer skin of said aircraft;

using a motor to rotate said member, and thereby said main reflector, about said azimuthal axis of rotation;

using an encoder to track said azimuthal axis of rotation and provide feedback to said motor; and

locating said azimuthal axis of rotation forwardly of a plane extending perpendicular to said axial center of said main reflector;

wherein said main reflector is fixedly supported relative to said platform ~~is fixedly coupled to a rotary joint~~ such that said main reflector rotates about said rotary joint and about said azimuthal axis of rotation; and

wherein said azimuthal axis is maintained forwardly of said main reflector at all times during rotation of said main reflector.

5. (Original) The method of claim 4, wherein the step of locating said azimuthal axis comprises locating said azimuthal axis generally within a plane bisecting said outermost lateral side portions of said main reflector.

6. (Original) The method of claim 4, wherein the step of locating said azimuthal axis comprises locating said azimuthal axis forwardly of a plane bisecting said outermost lateral side portions of said main reflector.

7. (Currently Amended) A method for mounting a rotatable reflector antenna having a curved main reflector with outermost lateral side portions and an axial center, to reduce a radius of a swept arc of said main reflector as said main reflector is rotated about an azimuthal axis of rotation, said method comprising the steps of:

supporting said main reflector on a platform;

using a motor to rotate said platform about said azimuthal axis of rotation;

using an encoder to track said azimuthal axis of rotation and provide feedback to said motor; and

locating said main reflector on said platform such that said azimuthal axis of rotation of said platform is forwardly of said axial center of said main reflector;

wherein said main reflector is fixedly supported relative to said platform ~~is fixedly coupled to a rotary joint~~ such that said main reflector rotates about said rotary joint and about said azimuthal axis of rotation; and

wherein said azimuthal axis is maintained forwardly of said main reflector at all times during rotation of said main reflector.

8. (Original) The method of claim 7, wherein said step of supporting said main reflector further comprises the step of supporting said platform adjacent an outer surface of an aircraft.

9. (Currently Amended) An antenna adapted to be rotated about an azimuthal axis of rotation in a manner which reduces the radius of an envelope within which said antenna moves during rotation of said antenna, said antenna comprising:

a curved main reflector having an axial center and outermost lateral side edges;

a platform for supporting said curved main reflector;

a motor for rotating said platform about said azimuthal axis; and

an encoder to track said azimuthal axis and provide feedback to said motor;

wherein said azimuthal axis is disposed, relative to said curved main reflector, such that said azimuthal axis is located forwardly of said axial center of said curved main reflector;

wherein said main reflector is fixedly supported relative to said platform ~~is fixedly coupled to a rotary joint~~ such that said main reflector rotates about said rotary joint and about said azimuthal axis of rotation; and

wherein said azimuthal axis is maintained forwardly of said main reflector at all times during rotation of said main reflector.

10. (Original) The antenna of claim 9, wherein said azimuthal axis is located approximately within a plane intersecting said lateral opposite side edges of said curved main reflector.

11. (Original) The antenna of claim 9, wherein said azimuthal axis is located forwardly of a plane intersecting said lateral opposite side edges of said curved main reflector.

12. (Previously Presented) The antenna of claim 9, wherein:

said antenna includes a feedhorn spaced apart from said curved main reflector; and

said platform couples said feedhorn to a transmission line using said rotary joint.

13. (Original) The antenna of claim 12, wherein said transmission line comprises a coaxial cable.

14. (Previously Presented) The method of claim 1, further comprising the step of using an elevation motor to position said main reflector at a predetermined elevation angle.

15. (Previously Presented) The method of claim 4, further comprising the step of using an elevation motor to position said main reflector at a predetermined elevation angle.

16. (Previously Presented) The method of claim 7, wherein said step of supporting said main reflector further comprises the step of using an elevation motor to position said main reflector at a predetermined elevation angle.

17. (Previously Presented) The antenna of claim 9, further comprising an elevation motor for positioning said main reflector at a predetermined elevation angle.